

CLAIM AMENDMENTS

1-27. (Cancelled)

28. (New) A method in a computer system for generating a new representation of a document, the document being represented in a hierarchical model having hierarchical relationships between elements and having non-hierarchical relationships between elements and content of elements, the method comprising:

identifying elements of the document that are to be items;

for each identified element, creating an item corresponding to the identified element;

for each created item, adding to the item that is a subject of a hierarchical relationship in the document a link to each item corresponding to an identified element that is an object of the hierarchical relationship; and

for non-hierarchical relationships between elements and content of elements of the document, adding to an item corresponding to the element that is the subject of the non-hierarchical relationship a link to the item corresponding to the content of the element that is the object of the non-hierarchical relationship

wherein the items and the links form the new representation of the document.

29. (New) The method of claim 28 wherein the hierarchical relationships are explicit and the non-hierarchical relationships are implicit.

30. (New) The method of claim 28 wherein the hierarchical model is XML based.

31. (New) The method of claim 30 wherein the hierarchical relationships are indicated by parent and child relationships of XML elements.

32. (New) The method of claim 30 wherein a non-hierarchical relationship is an attribute of an XML element that refers to another XML element.

33. (New) The method of claim 30 wherein a non-hierarchical relationship is a property of an XML element that refers to another XML element.

34. (New) The method of claim 30 wherein a non-hierarchical relationship is content of an XML element that refers to another XML element.

35. (New) The method of claim 28 wherein the new representation is based on an item, relationship, and attribute model.

36. (New) A method in a computer system for generating a new representation of a document, the document being represented in a hierarchical model having hierarchical relationships between elements and having non-hierarchical relationships between elements and content of elements, the method comprising:

- identifying elements of the document that are to be items in the new representation;
- for hierarchical relationships between elements of the document, adding to an item corresponding to the element that is a subject of the hierarchical relationship a link to the item corresponding to the element that is an object of the hierarchical relationship;

- for non-hierarchical relationships between elements and content of elements of the document, adding to an item corresponding to the element that is the subject of the non-hierarchical relationship a link to an item corresponding to the content of the element that is the object of the non-hierarchical relationship;
- and

- adding to items attributes of corresponding elements that do not indicate a relationship between elements.

37. (New) The method of claim 36 wherein the hierarchical relationships are explicit and the non-hierarchical relationships are implicit in the document and wherein the non-hierarchical relationships are explicit in the new representation of the document.

38. (New) The method of claim 36 wherein the hierarchical model is XML based.

39. (New) The method of claim 38 wherein the hierarchical relationships are indicated by parent and child relationships of XML elements.

40. (New) The method of claim 38 wherein a non-hierarchical relationship is an attribute of an XML element that refers to another XML element.

41. (New) The method of claim 38 wherein a non-hierarchical relationship is a property of an XML element that refers to another XML element.

42. (New) The method of claim 38 wherein a non-hierarchical relationship is content of an XML element that refers to another XML element.

43. (New) The method of claim 36 wherein the new representation of the document is based on an item, relationship, and attribute model.

44. (New) A computer-readable medium containing instructions for controlling a computer system to generate a new representation of a document represented in an XML model having relationships between elements and content of elements, by a method comprising:

identifying elements of the document that are to be items of the new representation;
for hierarchical relationships between elements, adding to an item corresponding to the element that is a subject of the hierarchical relationship a link to the item

corresponding to the element that is an object of the hierarchical relationship;
and

for non-hierarchical relationships between elements and content of elements,
adding to an item corresponding to the element that is the subject of the non-hierarchical relationship a link to the item corresponding to the content of the element that is the object of the non-hierarchical relationship.

45. (New) The computer-readable medium of claim 44 wherein the hierarchical relationships are explicit and the non-hierarchical relationships are implicit.

46. (New) The computer-readable medium of claim 44 wherein the hierarchical relationships are indicated by parent and child relationships of XML elements.

47. (New) The computer-readable medium of claim 44 wherein a non-hierarchical relationship is an attribute of an XML element that refers to another XML element.

48. (New) The computer-readable medium of claim 44 wherein a non-hierarchical relationship is a property of an XML element that refers to another XML element.

49. (New) The computer-readable medium of claim 44 wherein a non-hierarchical relationship is content of an XML element that refers to another XML element.

50. (New) The computer-readable medium of claim 44 wherein the new representation of the document is based on an item, relationship, and attribute model.